We claim:

1. A method of modulating peroxynitrite induced apoptosis in neuronal cells comprising contacting said cells with secreted neural apoptosis inhibiting protein (SNAIP).

2. The method of claim 1, wherein said method further comprises contacting said cells with heparin.

3. The method of claim 1, wherein said apoptosis comprises induction of the SIN-1 (3-morpholinosydonimine) peroxynitrite associated pathway.

4. [000182] The method of claim 3, wherein said pathway comprises activation of one or more of p38 MAPK, and growth arrest and DNA damage-inducible genes (GADDs).

5. The method of claim 3, wherein said pathway is detected by identifying a specific marker of protein nitration.

6. The method of claim 5, wherein said specific marker is 3 nitrotyrosine (3-NT).

7. The method of claim 4, wherein said GADDs are GADD34, GADD45 or GADD153.

8. The method of claim 1, wherein said apoptosis comprises mitochondrial dysfunction.

9. The method of claim 8, wherein said mitochondrial dysfunction comprises nitration of mitochondrial complex I subunits.

10. A method of protecting neurons from peroxynitrite-associated free radical-mediated cell death comprising contacting said cells with secreted neural apoptosis inhibiting protein.

11. A method of determining neuroprotective genomic targets associated with the peroxynitrite toxicity pathway, comprising:

i) contacting individual samples of neuronal cells each with and without secreted neural cell apoptosis inhibiting protein (SNAIP);

ii) contacting cells from step (i) with a peroxynitrite inducer;

iii) determining changes in expression of genes or proteins in cells of step (ii) and

iv) identifying genes or proteins modulated in the presence or absence of SNAIP and the inducer,

wherein genes or proteins so identified are correlated with inhibition of apoptosis induced by peroxynitrite induction.

12. The method of claim 11, wherein step (i) further comprises contacting said cells with or without heparin.

13. The method of claim 11, wherein said peroxynitrite inducer is SIN-1.

14. The method of claim 11, wherein said identified genes or proteins correlate with apoptosis.

15. A method for treating neuronal diseases associated with free radical mediated-cell death comprising administering to a patient in need thereof, a therapeutically effective amount of secreted neural apoptosis inhibiting protein (SNAIP).

16. The method of claim 15, wherein said diseases associated with said free radical-mediated cell death are selected from the group consisting of Parkinson's disease, multiple sclerosis, spinal cord injury, traumatic brain injury, stroke and Alzheimer's disease.

17. The method of claim 15, wherein said administration further comprises administration of heparin.